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Health in Boston a Century Ago

WE, who enjoy the benefits of modern preventive medicine, cannot appreciate fully our advantages until we consider the adverse conditions which constantly threatened the health of our forefathers. Comparison with those early days is, of course, difficult because of the extreme dearth of data, but occasionally figures do come to light which are very instructive.

In this category is a study by LEMUEL SHATTUCK on the VITAL STATISTICS OF BOSTON covering the period 1811-1839. Shattuck, a leading statistician of his day, was intimately acquainted with the public health problems of that period. His census of Boston in 1845 was a good piece of work and his SANITARY SURVEY OF MASSACHUSETTS is indeed a classic. It is fair to assume, therefore, that his treatise on the vital statistics of Boston a century ago is as reliable as was possible with the facts available.

Boston was then a thriving city of 60,000 inhabitants, almost all of whom were of native white stock. Foreign immigration had not yet begun to create congestion and poverty; and industrial expansion with its peculiar hygienic and sanitary problems had not yet occurred. One would suppose, therefore, that living conditions in that highly favored city were especially conducive to a low deathrate.

Shattuck shows, however, that the crude deathrate for the period 1826-1835 was over 21 per 1,000 population. For the years 1929-1931, the deathrate of Boston was about 14 per 1,000, or a third less than it was a century ago. These figures are informative, but they fail to tell the whole story. The age distribution of the population in 1830 was far more conducive to a low deathrate than is that of today. Less than 16 per cent. of the population were over 40 years of age, whereas today, about 33 per cent. are so classified. Fully 70 per cent. of the inhabitants in 1830 were under age 30, while only 51 per cent. of the present population are in this category. If there had been as large a proportion of old people in the population of Boston a hundred years ago as there is today, the crude deathrate would have been even higher, 24.0 per 1,000 instead of 21.0 as reported.

With so high a mortality, the expectation of life at birth did not exceed 38 years. Since expectation of life in Boston today is approximately 55 years, there has been a

gain of 17 years or 45 per cent. in the expectation of life during the last century.

That this increase in the expectation of life has not been attained solely through a saving of the lives of infants and young children, but has extended to ages up to 60 years, is evident upon an examination of the following table:

Average Deathrates per 1,000 Population, from All Causes, at Specific Ages, in Boston, Massachusetts, 1830 Compared with 1930.

Age Period	Average Deathrate	
	1826–1835	1929–1931
All Ages	21.3	14.4
Under 5	64.8	25.6
5–9	8.5	3.1
10–19	5.4	2.2
20–29	10.7	3.9
30–39	18.4	6.1
40–49	22.7	10.7
50–59	30.5	22.6
60–69	46.3	47.9
70–79	91.2	93.6
80–89	169.4	179.6
90 and over	307.6	291.9

Sources: Bills of Mortality, 1810–1849—City of Boston.
Massachusetts Vital Statistics, 1929–1930–1931.

The deathrate among children and adolescents a hundred years ago was extremely high, in fact two and one-half times that prevailing today; but the difference in mortality among young adults (20-39) was even greater, the deathrate being at least three times that recorded at the present time. The stress and tempo of modern civilization is thought by some to be responsible for the high mortality nowadays among persons in the forties and fifties. Yet a century ago, when life was much more simple and unhurried, the mortality between the ages of 40 and 50 years, was twice as great as in this generation; and for every 100 people who die between fifty and sixty years of age at the present time, 135 passed away in the days of our grandparents. Among persons over 60 years of age, little change in mortality has occurred since 1830, and that little has been in the wrong direction.

It is unfortunate that comparison of the various causes of death in the two eras is practically impossible. The reasons for this are numerous: inaccuracy in diagnosis, due to inferior medical knowledge and facilities during the earlier period; disparity in nomenclature and classification of causes of death now and a century ago; and further, the carelessness of many physicians in the earlier period in recording the

cause of death. Fully 40 per cent. of the old death certificates failed to supply specific information as to the cause of death—either stating that the cause was unknown or ascribing the deaths to such indefinite causes as "old age," "debility," "marasmus," "atrophy," "fever," "shock," "sudden death," etc.

Some conception of the unreliability of these old records, so far as causes of death are concerned, may be acquired from the fact that during the five year period 1828-1832, out of a total of 6,764 deaths from all causes, only 23 were assigned to cancer, 41 to heart disease, and just 1 to diabetes. The great scourge of the period seems to have been tuberculosis ("consumption"). There were 1,062 deaths from tuberculosis, which corresponds to an annual deathrate of 345 per 100,000. Although this number may have included erroneously many cases of obscure character, the symptoms of which pointed to tuberculosis, the very high general mortality registered in adolescence and early adult life indicates conclusively that this disease must have been rampant. Indeed, Shattuck states, "that from one-fourth to one-seventh of all the deaths in the Northern and Middle States, and perhaps throughout the whole Union, and the civilized world, are caused by consumption." At the present time, with a tuberculosis deathrate of only 65 per 100,000, as against the 345 in Shattuck's study, the city of Boston records no more than one-twentieth of all deaths as due to this disease.

The one cause of death that is subject to fair comparison between the two epochs is accidents; it is surprising to find that, despite the automobile and industrial hazards of the machine age, the mortality from this cause was almost the same in 1930 as it was in 1830, 74.4 as against 71.7 per 100,000. The chief item in the high mortality from accidents in 1830, and one which possibly reflects the maritime character of the people, was accidental drowning. While the deathrate from drowning among the people of Boston is only about 5 per 100,000 today, it was more than five times as high—28 per 100,000—in the Boston of a hundred years ago.

It would be interesting, indeed, if further comparison were possible; but Shattuck's study as it stands throws sufficient light on health conditions in 1830, to remind us very forcibly of the great progress which medical science and sanitation have made in the course of a century, and their effect upon the preservation of human life.

Mortality Experience of the First Three Months of 1934

THE health of the Metropolitan Industrial policyholders, as measured by their deathrate of 9.9 per 1,000, was good during the first quarter of 1934. This figure, though very slightly higher than for the

like part of last year, is nevertheless below the average of the last 10 years. As a matter of fact, up to the end of February, the 1934 cumulative deathrate actually showed some improvement over 1933, but the March mortality rate exceeded that for the same month of last year by a sufficient margin to raise the deathrate for the quarter slightly above that for the same period of 1933. This statement applies to the total Industrial policyholders. If we segregate the white policyholders we find for the first quarter of 1934 identically the same figure, 9.1 per 1,000, as last year. Also, if we consider separately our Canadian policyholders and those residing in the Pacific Coast and Rocky Mountain States, we find for these an improvement as compared with last year. In the remainder of the United States, however, where the great bulk of the sixteen millions of the Metropolitan Industrial policyholders live, the mortality rose 2.2 per cent.

Where the Deathrate Has Declined

The outstanding instances of causes of death showing reduced mortality rates, as compared with the first quarter of 1933, are tuberculosis, influenza, diseases of the puerperal state and suicide.

Tuberculosis

Current indications point to another large reduction of the tuberculosis deathrate in 1934. There was a drop of 6.7 per cent. in the first quarter from the previous minimum recorded last year. It was only nine years ago that the mortality of the Metropolitan Industrial policyholders from this disease dropped for the first time below 100 per 100,000. Since then there has been a further decline of more than one-third. Among insured white persons, the tuberculosis deathrate for the first quarter was at the remarkably low figure of 51.2 per 100,000. Based on the experience of previous years, we may expect, when 1934 is completed, a tuberculosis mortality rate well below that for the first quarter of the year. There is, therefore, a strong probability that for all the Industrial policyholders combined the year will register a mortality of not far from 60 per 100,000; and for the white policyholders it should run well below 50 per 100,000. Both the white and colored insured have shared in the decline which has been recorded thus far this year.

Influenza

In the first quarter of last year, nearly one-sixth of all the deaths were due to influenza and pneumonia. The winter just passed, however, has been practically free from epidemic influenza. Pneumonia, on the other hand, has been more prevalent than last year, and this is especially so among the colored policyholders whose pneumonia deathrate rose 26 per cent.

Deathrates per 100,000 Persons Exposed. First Quarters of 1932, 1933 and 1934 Compared. By Color for Principal Causes of Death. Metropolitan Life Insurance Company, Industrial Weekly Premium-Paying Business.*

Causes of Death	Deathrates per 100,000 Persons Exposed*					
	White			Colored		
	Jan.-Mar. 1934	Jan.-Mar. 1933	Jan.-Mar. 1932	Jan.-Mar. 1934	Jan.-Mar. 1933	Jan.-Mar. 1932
Total—All Causes	909.7	907.2	852.9	1688.9	1604.5	1557.2
Typhoid fever	.8	.8	1.2	2.3	1.3	1.9
Measles	3.9	1.9	3.0	1.4	.2	1.3
Scarlet fever	4.2	4.1	4.1	1.4	1.8	1.3
Whooping cough	4.0	3.0	3.6	5.4	.7	3.8
Diphtheria	3.0	3.0	6.0	1.2	1.3	1.9
Influenza	17.3	48.5	24.7	49.8	95.2	56.5
Meningococcus meningitis	.9	1.8	1.4	1.2	2.7	2.1
Tuberculosis (All forms)	51.2	55.1	56.9	169.7	179.5	197.4
Tuberculosis of respiratory system	45.2	50.0	50.7	151.2	161.1	177.8
Tuberculosis of the meninges, etc.	2.5	2.0	2.6	4.0	5.4	4.4
Other forms of tuberculosis	3.5	3.1	3.6	14.5	13.0	15.2
Cancer (All forms)	98.1	93.2	87.9	109.8	98.4	98.8
Diabetes mellitus	28.2	28.2	23.6	33.2	30.9	30.3
Alcoholism	2.1	2.4	2.7	5.4	2.2	5.1
Cerebral hemorrhage; apoplexy	66.2	65.0	59.5	139.7	134.2	139.3
Diseases of heart†	185.0	174.4	158.0	329.0	301.2	254.3
Total respiratory diseases	105.4	104.2	97.1	213.4	174.1	193.6
Bronchitis	4.0	3.5	2.9	3.7	5.4	5.9
Bronchopneumonia	35.6	38.3	33.3	57.1	46.2	48.9
Pneumonia (lobar and undefined)	57.9	54.8	53.2	142.1	111.6	124.9
Other diseases of resp'y system	7.9	7.7	7.7	10.5	11.0	13.9
Diarrhea and enteritis	7.2	6.9	8.4	8.7	6.3	5.7
Under 2 years	5.2	5.3	6.3	3.0	2.0	1.7
2 years and over	1.9	1.6	2.1	5.6	4.3	4.0
Acute nephritis	3.1	2.1	3.3	10.5	11.0	9.3
Chronic nephritis (Bright's disease)	65.2	64.3	65.3	156.6	149.7	144.1
Puerperal state—Total	9.5	9.6	10.8	15.4	17.0	15.4
Total external causes	66.7	63.1	62.4	114.9	95.2	95.9
Suicides	10.2	10.7	10.1	7.3	9.4	7.0
Homicides	2.9	3.0	3.3	29.0	28.0	31.6
Accidents—Total	53.6	49.4	49.0	78.6	57.8	57.3
Automobile accidents	20.1	17.1	18.2	23.6	17.3	18.8
All other diseases and conditions	187.8	175.4	173.1	319.9	301.4	299.4

*All figures in this table include insured infants under one year of age. The rates for 1934 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

†Excludes pericarditis, acute endocarditis, acute myocarditis and angina pectoris.

Causes of Death Registering Higher Mortality Rates

Deathrates in excess of those of the first quarter of 1933 are recorded for three of the principal epidemic diseases of childhood. The rate for measles has more than doubled since 1933, that for whooping cough has increased by one-half, while scarlet fever shows an increase of one in the first decimal of the deathrate per 100,000. The diphtheria mortality rate, for the first time in many years, has failed to show improvement over the figure recorded for the corresponding part of the preceding year. There has been no increase, it is true; but we have become so accustomed to an unbroken decline in diphtheria mortality that even the slightest interruption comes as an unwelcome surprise. Certain aspects of the diphtheria situation so far this year are unusual. During January and February, more *cases* but a lower mortality were reported throughout the country than during these months in 1933. In March, this situation was reversed, with fewer cases but a higher mortality. The disease must have been of a more virulent type, since the deathrate among insured children rose 44 per cent. above that of March, 1933. With every passing year, up to the present at least, the campaign against diphtheria has been more and more effective. The disease is clearly well on the way to complete control unless the health departments are to be so crippled by insufficient funds that they will be unable to function adequately in their diphtheria immunization programs. Every death from diphtheria is a needless sacrifice of child life.

Increased Mortality Rates from the Principal Degenerative Diseases

The crude deathrates for cancer, cerebral hemorrhage, heart disease and chronic nephritis have all increased, especially those for cancer (6 per cent.) and heart disease (6.6 per cent.). Part of the rise from these degenerative diseases was unquestionably due to a continuance of the shift in the age distribution of the insured toward the older ages, where most of the deaths from these degenerative diseases occur.

Other causes of death which registered higher mortality rates than in the first quarter of 1933 were diabetes (very slight increase), pneumonia (5 per cent.), "other respiratory diseases," diarrheal complaints, homicides, all types of accidents and especially automobile fatalities.

Accidents and Automobile Fatalities

The fear, expressed in an earlier STATISTICAL BULLETIN, that returning prosperity, with its consequent increase in gainful employment, would be reflected this year in a rise in fatal accidents, was well founded. The deathrate from all forms of accidents combined increased from 50.4 per 100,000 for the first quarter of 1933, to 56.3 during the like part of 1934. This is equivalent to a rise of 11.7 per cent. There was an even sharper rise in the automobile accident deathrate, which increased 20 per cent. in the first quarter.

Alcoholism Deathrate Unchanged

This is the first full quarter-year since the close of the era of National Prohibition. It finds the alcoholism deathrate of the Metropolitan Industrial policyholders unchanged as compared with that for the like part of 1933. In fact, among white persons, the deathrate dropped from 2.4 per 100,000 in the first quarter of last year to 2.1 this year. Among the colored, however, the mortality rate rose sufficiently to counterbalance this decline.

Prevent Vacation Typhoid

THE phenomenal decline in the deathrate from typhoid fever since the early years of the present century has tended to create a false sense of security from the disease. This is true particularly in the case of city dwellers, who by reason of careful supervision usually given their water and milk supplies, are often unaware of the real if unseen dangers that lurk in a farmhouse well, a bottle of raw milk, and in rivers and other bodies of water (that invite them to swim) when they go into rural areas on their summer vacations.

While there have been far fewer deaths from typhoid fever in recent years, there has been little or no improvement in the case-fatality rate of the disease. Its victims are just as sick, and the same proportion of them die as formerly. The decrease in mortality has been due to the decrease in the number of cases of the disease, and it is in further reduction of the cases that we must seek still further improvement in the typhoid fever deathrate.

Every precaution should, of course, be taken to avoid infection. While on vacation, water should be drunk only from sources known to be well chlorinated, or free from contamination. If there is any doubt about its sanitary quality, water for drinking purposes should be boiled before use. Exposure to the air, and cooling, will restore much of its palatability.

Similar care should be exercised in the selection of a milk supply. Even under better-than-average conditions of cleanliness surrounding production, milk may be infected by typhoid organisms from a healthy, unrecognized carrier of the disease. Carefully supervised pasteurization of the milk, its bottling in sterile containers by sterile apparatus, and mechanical capping, offer a desirable guarantee of safety. In the absence of such safeguards, and particularly if there is any history of typhoid fever on the farm or in the neighborhood, home pasteurization—heating the milk in a double-boiler to 145 degrees F., and holding it at that temperature for a half-hour—will make it safe without affecting its digestibility or taste.

The selection of a bathing place is also a matter that demands careful consideration. The sports pages of our newspapers recently hailed the return to competition of a former

swimming champion after a long and serious illness which began as typhoid fever. One paper stated that he had participated last autumn in the national long-distance championship swim in the Delaware River, and it was the opinion of physicians that he had picked up typhoid there.

Most inland water courses, and particularly those that flow past large cities, are polluted by fresh, untreated sewage. Lakes bordered by summer cottages and hotels may be equally dangerous, and persons who swim in such waters run the chance of contracting typhoid fever unless they are protected against the disease by preventive inoculation.

It usually requires from six weeks to two months for typhoid immunity to develop its maximum efficacy. Health officers, and physicians who have the welfare of their clients at heart, will recommend that persons planning summer vacations in the country, where exposure to one or more of these sources of typhoid infection is possible, start a course of protective inoculations immediately in order that they may go on their holidays fully protected against an unnecessary and dangerous disease.

Longevity in the Middle Atlantic States

As would naturally be expected of industrial states with largely urban population, the States of New York, New Jersey and Pennsylvania all fall below the average for the United States as regards the expectation of life at birth, according to new life tables for the period 1929-1931 just completed by the Statistical Bureau of the Metropolitan Life Insurance Company. New Jersey comes nearest to the general average, with an expectation of life of 58.96 years for white males and 62.72 years for white females, as against the figures of 59.31 and 62.83 for the United States as a whole. One might say that New Jersey has just about struck the average. On the other hand, New York is appreciably below the average, with 57.84 years for white males and 61.72 years for white females. It is thus over a year short of the average for white females and in the case of males almost a year and a half. Pennsylvania ranks third as regards expectation of life at birth, but follows very closely on New York, with 57.68 years for white males and 61.35 years for white females, in each case only a fraction below the figures for New York State. Although the order of these rankings among the states here considered changes at the subsequent ages, at no age up to 85 does the expectation of life in any one of these three states attain the level of that in the United States as a whole.

The figures cited so far refer to the expectation of life. The corresponding mortality rates present a slightly different picture. It will be noted from the accompanying table that mortality better than the general average for the United States is shown in New York and New Jersey

Expectation of Life and Mortality Rate per 1,000 at Specified Ages, for White Persons, by Sex. United States, New York, New Jersey and Pennsylvania for the Period 1929-1931*

Age	Males				Females			
	United States*	New York	New Jersey	Pennsylvania	United States*	New York	New Jersey	Pennsylvania
	Expectation of Life							
0	59.31	57.84	58.96	57.68	62.83	61.72	62.72	61.35
1	62.12	60.58	61.39	60.99	64.99	63.85	64.53	63.89
2	61.73	60.10	60.90	60.63	64.55	63.33	64.00	63.48
3	61.06	59.39	60.21	59.97	63.85	62.60	63.27	62.78
4	60.29	58.60	59.45	59.20	63.06	61.79	62.48	61.99
5	59.47	57.78	58.65	58.39	62.22	60.95	61.65	61.16
10	55.03	53.39	54.27	53.95	57.70	56.44	57.14	56.64
15	50.46	48.81	49.70	49.36	53.03	51.77	52.46	51.96
20	46.07	44.36	45.26	44.91	48.55	47.25	47.94	47.46
25	41.81	40.01	40.91	40.61	44.25	42.88	43.57	43.15
30	37.57	35.69	36.56	36.36	39.99	38.53	39.22	38.90
35	33.36	31.45†	32.27	32.14	35.74	34.20	34.91	34.65
40	29.25	27.36†	28.13†	28.06†	31.53	29.93	30.64	30.46
45	25.30	23.47†	24.18†	24.21†	27.40	25.80	26.48	26.35
50	21.54	19.87†	20.48†	20.56†	23.41	21.90	22.49	22.41
55	17.99	16.57†	17.09†	17.16†	19.60	18.25	18.74	18.71
60	14.73	13.62†	14.05†	14.05†	16.05	14.94	15.33	15.30
65	11.79	11.00†	11.35†	11.22†	12.83	11.99	12.30	12.22
70	9.22	8.65†	8.92	8.74†	9.98	9.38	9.63	9.50
75	7.03	6.61†	6.86	6.61†	7.58	7.18†	7.33	7.22
80	5.27	4.98†	5.17	4.92†	5.66	5.43†	5.51†	5.40
85	3.94	3.76	3.85	3.65	4.22	4.08	4.22	4.02
90	2.88	2.80	2.83	2.71	3.11	3.07	**3.27**	2.94
	Mortality Rate per 1,000							
0	60.86	61.26	**55.40**	70.16	48.21	48.61	**43.21**	54.97
1	9.88	**8.57**	**8.33**	10.49	8.71	**7.48**	**7.30**	9.25
2	5.33	**4.83**	**5.08**	5.55	4.65	**4.33**	**4.27**	4.78
3	3.73	**3.62**	3.92	3.93	3.30	**3.08**	**3.27**	3.40
4	3.00	3.15	3.36	3.15	2.55	**2.53**	2.73	2.71
5	2.51	2.75	2.86	2.62	2.08	2.16	2.27	2.22
10	1.45	1.59	1.60	1.45	1.09	1.20	1.10	**1.08**
15	2.10	**2.03**	**2.03**	**1.94**	1.63	**1.57**	**1.52**	**1.55**
20	3.12	**2.88**	**2.86**	**2.96**	2.70	**2.54**	**2.46**	**2.68**
25	3.66	**3.38**	**3.24**	**3.63**	3.36	**3.10**	**2.95**	3.42
30	4.12	**4.05**	**3.69**	4.17	3.74	**3.48**	**3.43**	3.85
35	5.07	5.33	**4.93**	5.32	4.31	**4.13**	**4.08**	4.53
40	6.79	7.58	6.94	7.62	5.32	5.42	**5.19**	5.61
45	9.25	10.98	10.12	10.62	6.99	7.86	7.13	7.50
50	12.72	15.99†	14.58†	14.59†	9.55	11.41	10.32	10.64
55	18.19	23.20†	21.48†	20.77†	13.82	17.06	15.54	15.83
60	26.35	33.14†	31.11†	29.42†	20.63	25.78	23.97	23.55
65	38.70	46.24†	43.11†	42.44†	31.34	37.74	35.84	34.98
70	57.33	64.85†	62.01	61.71†	48.36	55.62	52.54	53.39
75	85.75	94.84†	90.45	92.80†	75.27	84.35	80.07	81.60
80	128.38	139.39†	131.98	139.30†	116.06	124.29†	123.31	123.85†
85	183.11	194.70†	187.89	200.69†	168.93	177.50†	175.66†	178.70†
90	255.13	264.89†	261.71	276.86†	236.62	245.27†	**230.63**	249.97†

Note: Figures in bold face indicate mortality more favorable than in United States as a whole.
*Death Registration States of 1929.
†Indicates retrogression from the corresponding value according to the Foudray table for 1919 to 1920.

for early childhood and a range of ages from about 15 to about 35 (the exact range varying with the State and sex). These rates that are more favorable than the general mortality for the United States are shown in boldface type in the table.

Comparison of the figures for 1929-31 with those for 1919-20 shows that in their expectation of life white males have made gains at junior ages, up to age 35 in New York and up to age 40 in New Jersey and Pennsylvania. The retrogression in expectation of life commencing at these ages continues to age 80 in New York and Pennsylvania, but only to age 65 in New Jersey. On the other hand, in each of the three states white females of practically all ages have higher expectations of life today than they had a decade ago. Slight exceptions occur at about age 80 in the States of New York and New Jersey.

Making a similar comparison between 1929-31 and 1919-20 with regard to mortality, we see that white males in the three states have shown an improvement up to age 50 but a retrogression for all ages above that, a minor exception being noted in the case of New Jersey, where an improvement is also shown at ages 70 and over. Among white females, an improvement in mortality is noted at all ages up to 80 in each of the three states. In no instance does the mortality of white females exceed that of white males. When we take into consideration the industrial and urban character of these states, their mortality record must be regarded as very satisfactory.

Health Record for March, 1934

THE deathrate of Metropolitan Industrial policyholders in March, while below the average for that month, was nevertheless appreciably higher than that registered either for February of this year or for March of last year. The rise from the February mortality rate was the usual seasonal one.

In the general population of the large cities of the United States the deathrate for the month of March was exactly the same as that recorded for February, namely 12.7 per 1,000 estimated population. This may be compared with the deathrate which prevailed in March of last year, 11.8. As compared with February, there was increased prevalence during March of measles, poliomyelitis, scarlet fever and smallpox, together with fewer cases of diphtheria, influenza and typhoid fever. Compared with March, 1933, there was more sickness from influenza, measles and poliomyelitis, but fewer cases of diphtheria, scarlet fever, smallpox and typhoid fever.

The current year, to date, has been marked by an unusual amount of measles. There were 127,577 cases in 44 states in March, as compared with 94,156 in February. The outstanding rises in March were in Pennsylvania, Ohio, Illinois, Maryland, Virginia and Kentucky.

The following table shows the mortality among Industrial policyholders for March, 1934; February, 1934, and March, 1933, together with the cumulative rates for the first three months of each year.

METROPOLITAN LIFE INSURANCE COMPANY

Deathrates per 100,000 for Principal Causes. Weekly Premium-Paying Business in Industrial Department. All Ages (Annual Basis).*

MONTHS OF MARCH, 1934; FEBRUARY, 1934, AND MARCH, 1933

CAUSES OF DEATH	ANNUAL RATE PER 100,000 LIVES EXPOSED*				
	Mar. 1934	Feb. 1934	Mar. 1933	Cumulative January-March	
				1934	1933
TOTAL—ALL CAUSES	1017.4	941.5	938.5	994.7	983.3
Typhoid fever	.8	1.1	.8	.9	.9
Measles	5.9	3.3	2.3	3.6	1.7
Scarlet fever	4.7	3.3	3.7	3.9	3.8
Whooping cough	5.4	3.5	2.8	4.2	2.8
Diphtheria	2.6	2.5	1.8	2.8	2.8
Influenza	21.1	19.6	27.4	20.8	53.6
Tuberculosis (All forms)	65.5	59.9	71.7	64.1	68.7
Tuberculosis of respiratory system	57.3	53.4	64.1	56.8	62.1
Cancer (All forms)	96.4	98.2	91.7	99.4	93.8
Diabetes mellitus	30.8	25.1	26.0	28.7	28.5
Cerebral hemorrhage; apoplexy	74.0	72.1	73.6	74.2	72.5
Diseases of heart†	204.0	187.7	178.6	200.7	188.2
Pneumonia (All forms)	111.5	101.4	87.9	105.1	100.1
Other respiratory diseases	12.4	11.1	10.7	12.1	11.7
Diarrhea and enteritis	8.0	6.1	6.9	7.3	6.8
Chronic nephritis (Bright's disease)	76.6	71.3	72.7	75.2	73.6
Puerperal state—Total	10.7	9.3	9.8	10.2	10.4
Suicides	10.0	7.5	10.9	9.8	10.6
Homicides	6.1	5.1	5.2	5.8	5.7
Accidents—Total	53.7	53.2	47.4	56.3	50.4
Automobile accidents	16.5	20.1	16.0	20.5	17.1
All other diseases and conditions	217.0	200.0	206.8	209.4	196.5

*The rates for 1934 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

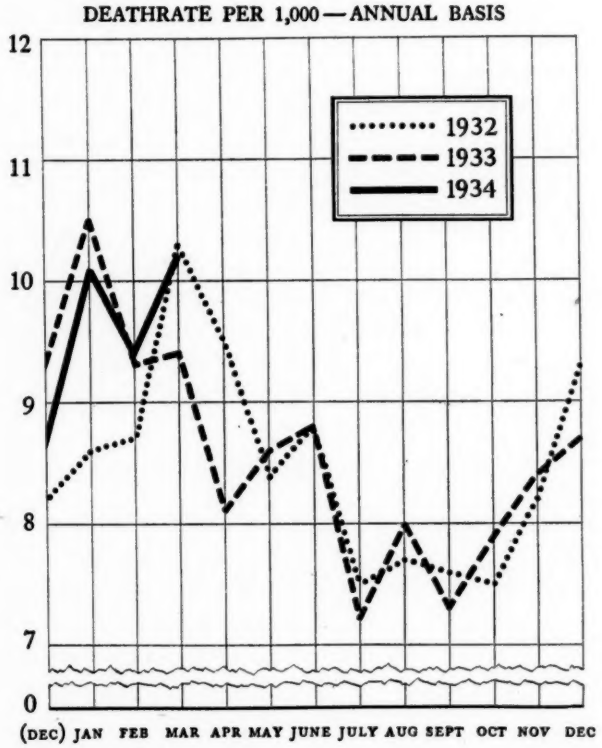
†Excludes pericarditis, acute endocarditis, acute myocarditis and angina pectoris.

Correspondence on the subjects discussed in these BULLETINS may be addressed to: The Editor,

STATISTICAL BULLETIN,
Metropolitan Life Insurance Company,
1 Madison Avenue, New York City

DEATHRATES FROM ALL CAUSES

in the Metropolitan Life Insurance Company
Industrial Department



1932	8.6	8.7	10.3	9.5	8.4	8.8	7.5	7.7	7.6	7.5	8.2	9.3
1933	10.5	9.3	9.4	8.1	8.6	8.8	7.2	8.0	7.3	7.9	8.4	8.7
1934*	10.1	9.4	10.2									

* *Rates for 1934 are provisional.*

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